DOCUMENT RESUME

ED 317 242 JC 900 192

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TITLE The Predictability of College Transfer Student Performance.
PUB DATE 90
NOTE 10p.
PUB TYPE Viewpoints (120)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Academic Achievement; *Academic Aptitude; College Entrance Examinations; College Students; *College Transfer Students; Community Colleges; Comparative Analysis; Grade Point Average; Higher Education; *Predictor Variables; Private Colleges; Two Year Colleges; Two Year College Students

ABSTRACT

A study was conducted to investigate the differential predictability of academic success between those who transferred to a private multipurpose university from two-year colleges and those who transferred from four-year institutions. The study looked at success after one academic year, using Scholastic Aptitude Test (SAT) scores and grade point averages (GPA's) at the time of transfer as predictors. Data were collected from 697 students who transferred to the university during the academic years 1984 through 1989. The students transferred from six four-year colleges, nine community colleges, and one private two-year college. Findings included the following: (1) overall GPA at the time of transfer was 2.78 for two-year college transfers and 2.42 for four-year college transfers; (2) GPA after two semesters was 2.31 for two-year college transfers and 2.62 for four-year college transfers; (3) SAT verbal scores averaged 409.7 for two-year college transfers and 449.9 for four-year college transfers; and (4) SAT math scores averaged 453.0 for two-year college transfers and 490.9 for four-year college transfers. Cross validation was conducted by using 1988-89 data on 88 students. The study suggested that GPA at the time of transfer was the best predictor of academic success for transfer students from two-year colleges, and that both SAT scores and GPA's were necessary variables for predicting the academic success of transfer students from four-year institutions. (WJT)

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The Predictability of College Transfer Student Performance

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The Predictability of College Transfer Student Performance

Introduction

The prediction of academic success is a time honored activity for those interested in the issues of test validity. The past efforts have frequently focused attention on the predictive validity of the venerable Scholastic Aptitude Test. These studies have attempted to document possible item bias or even differential validity of the whole test with regard to select sub-populations of students (Cleary, 1968). In a 1984 review of over 2000 studies, conducted on students at 685 different colleges, the average predicted validity coefficient for the Scholastic Aptitude Test was found to be .42 (Donlon, 1984). This average for the predictive validity of this instrument is one which is likely to have been suppressed by attenuation of the distribution due to the selective admissions process of many institutions. Possibly for that reason, the best single predictor of undergraduate academic success is high school grade point average (Donlon, 1984).

Validity studies using weighted combinations of academic predictors have demonstrated that different ethnic sub-populations tend to have different predictive validity (Bowers, 1970; Stanley & Porter, 1967). It has also been demonstrated that the predictive validity of college admission tests tend to differ according to socioeconomic status within racial groups (Wright & Bean, 1974).

The majority of literature in this field tends to focus upon the validity of freshman admission decisions. Much less literature is available on the question of academic predictability for students transferring from one institution to another. The major research theme has been the difference between students who transfer into four year institutions as compared to students who are "natives". "Natives" refer to these students who have started at the four year university as a freshman (Palmer, 1982). The general finding has been that students who transfer from the two year institution do not do as well as the "native" students who began their career at the four year institution. Scherini (1985) compared the persistence of transfer students from two year institutions and four year institutions. Her research concluded

that the transfer student from the two year institutions had a slightly higher retention and graduation rate than was true for transfer students from four year institutions. A counter point to this research is provided by research reported by the Florida State Department of Education (1983) which conducted research that showed that students who transferred from two year institutions tended to have lower levels of retention and a poorer chance for graduation than the "native" student.

An interesting analysis of the problem of predicting transfer success rates is provided by Graham (1987). His research on the theme of "transfer shock" reported that transfer students tended to have a lower persistence rate during their first two terms; but, they tended to increase their academic success rates if they remained at the institution beyond one year.

Hills (1965) reviewed studies conducted on transfer students from 1928 through 1964. Based on this review he predicted that transfer students should suffer an appreciable drop in their grade point average during the first semester after transfer, but that their grades should improve in direct relation to the number of terms spent at the new college. He also predicted that as a group "native" students should perform better than transfer students.

Johnson & Richardson (1986) developed a causal model to explain the factors influencing the attrition rates related to persistence and retention of community college transfer students who now attend four year programs. The most salient feature of this model for two year college students is grade point average. Not surprisingly, they found that the students' grade point average had a direct and positive influence on whether the student returned to the new university the following semester. While the academic issue was the most important concern in the persistence of transfer students, other variables important to the continuing success of this group were also identified. These include the level of educational aspiration and the feeling of academic satisfaction.

Research conducted by Doherty & Vaughn (1984) at the University of Virginia, showed no difference in the grade point average between the two year transfers and the native students. Their research findings also showed that the attrition was related to the major field

choice more than any other factor. In this study the greatest success for transfer students was in the School of Education and poorest in the School of Engineering.

In a research study conducted of 30 institutions and involving over 63,000 transfer students, Hand & Prather (1984) examined factors related to the type of institution, gender and minority status of students. These factors were all found to have impact upon transfer success. Their analysis reported that typically when students transfer their grade point average increases. The exception is when students are transferring to a four year institution from two institutions or from outside the university system.

Very little research has been done on the question of comparing transfer students who have come from two year institutions with those who have transferred from other four year institutions. One study of this issue conducted with over 3400 transfer students at a major state university has shown that the grade point average at the time of transfer tended to be higher for students transferring from other four year institutions than those who transferred from two year institutions. Students who transferred from either type of institution were as likely to graduate as were the "native" students. It is interesting to note that in this study that students who transferred from two and four year institutions had an even higher grade point average and a higher rate of graduation than did the "native" students (Holahan, Green, & Kelly, 1983).

Here-to-fore the research on transfer students has examined success rates for native and transfer students. Another theme in research has examined the difference between the groups in terms of graduation rates. Very little work has been directed to possible differences in predictability between those who transfer from two year and those from four year colleges. The focus of this study is on the question of differential predictability of students from two and four year colleges into a private multipurpose university. The criteria is success after one academic year and the predictors are the Scholastic Aptitude Test Scores and grade point average at the time of transfer.

Methods

Data for this study were collected from all transfer students into a comprehensive private university during the academic years 1984 through 1989. The first four years of data were used as the validation sample and the 1988-89 data were used for the purpose of cross validation.

During the validation years, a total of 1358 students were included in the transfer population. These students came from a total of 372 different post secondary institutions. This sample was reduced to include only those students from institutions that transferred 8 or more students during the period of study. This reduced the total number of institutions down to a manageable level of 16. This represented a total of 6 four year institutions, 9 community colleges and 1 two year private college. These institutions transferred a total of 697 students to the four year program during the validation period.

The criterion for this study was the grade point average after two academic semesters following the transfer. The predictors included undergraduate grade point average during the first two years at the institution from which the students were transferred. Other academic predictors included the students verbal and mathematics scores on the Scholastic Aptitude Tests.

Results

Means and standard deviations for the three predictors and criterion scores for the two groups are presented in Table 1. Linear regression equations for the data for the two groups were calculated independently. Table 2 presents the results from this analysis.

Table 1

Means and Standard Deviations for Transfer Students 1984 - 1988

	College Transfers	
	2 Year	4 Year
G.P.A. at time of transfer	2.78	2.42
G.P.A. after two semesters	2.31	2.62
SAT - Verbal	409.7	449.9
SAT - Math	453.0	490.9

Table 2

Multiple Correlations and Standardized Regression Weights

	R	SAT-V	SAT-M	GPA
Two Year Transfers	.196114	.135820	-.027272	.391116
Four Year Transfers	.14352	.153696	.221967	.120801

While both equations resulted in significant values for the multiple correlations, the pattern of regression weights is quite different. Confidence intervals were generated for the weights and significant differences between the equations for the two groups were established. The SAT-V and SAT-M predictors have entirely different weights associated with them for the two groups ($\alpha < .05$). No significant difference was noted for the regression weight for the grade point average at the time of transfer. This predictor contributes very well to both equations.

Cross validation was conducted by using data from 1988-1989. The two year scores were applied to all 181 transfer students from the ten schools identified in the study. Cross validation for the students from four year colleges was expanded from the validation group of six colleges to include all transfer cases from any four year college that year. This expansion was necessitated as too few cases were available from the four year colleges for that year. The base was expanded to include the total population of four year transfer schools that year. It included a total of 23 four year colleges. A total of 88 students were included in the cross validation. The cross validation correlation for two year schools is .1404 ($\alpha < .01$) and for four year schools .3585 ($\alpha < .01$).

Discussion

From these data several points are evident. First transfer policies at four year post secondary institutions cannot be built upon the assumption that one policy on transfer will fill all cases. Our data clearly provide documentation that transfer students from two and four year colleges must be viewed differently.

Students from two year schools are best predicted by their grade point averages at the time of transfer. When decisions about transfer students from four year institutions are made, the admissions procedure should take both Scholastic Aptitude Test scores and grade point average into account.

The difference could have several explanations. Obviously the population from which these students are drawn is different. Age was explored as one possible source of each difference. A "t" test was conducted and no significant difference was found. Likewise the question of the number of credits completed at the time of transfer was also examined, and no significant difference was noted.

It is likely that differences in these 2 populations are best seen in the socioeconomic status of these two groups. Previous research on this issue of the predictability of regularly admitted undergraduate students to an urban state university demonstrated a direct relationship between predictability and socioeconomic status

(Wright & Bean, 1974). Unfortunately these data were not available for this study. However, the general perception of students attending four year colleges is that they represent a different socioeconomic level than their peers attending two year colleges.

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